

## Toroidal Sector Type Beta Ray Spectrometer

SOV/AB-22-1-25/26

tested by means of an Agfa Texo-R X-ray film, and with the isotopes  $\text{Th(B+C)}$  and  $\text{Cs}^{137}$ . According to the preceding  $\text{Cs}^{137}$  measurements, the line half-width was about 3-4 %, and the luminous intensity - 2.5 %. These properties are shown by all ordinary lenses. The spectrometer under consideration has some new, valuable features: 1) As measurements have shown, there is no magnetic field at the points where the source and the detector are. 2) Operation of the spectrometer requires very low current intensities, not more than 3 Amps. 3) The design does not call for lenses separating electrons from positrons. This, and especially the first property, permits to investigate the  $\beta\text{-}\gamma$ ,  $e^+\text{-}\gamma$ , and  $e^+\text{-}\beta$  coincidences with this spectrometer. The equipment needed is already under construction at the Institute, and is being adjusted. There are 3 figures and 1 reference, 0 of which is Soviet.

ASSOCIATION: Institut yadernykh issledovaniy Vengerskoy Akademii nauk  
(Institute of Nuclear Research of the Hungarian Academy of Sciences)

Card 2/2

AUTHORS: Szalay, S., Bereñyz, D.

SOV/48-22-7-23/26

TITLE: Toroidal Sector Type Beta Ray Spectrometer ( $\beta$ -spektrometr toroidal'no-sektornogo tipa)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 23, Nr 7, pp. 877-878 (USSR)

ABSTRACT: This is a brief note concerning the toroidal spectrometer constructed at the Institute of Nuclear Research of the Hungarian Academy of Sciences, the first communication having been made in reference 1. The focusing principle is given. The toroidal coil core is a ring divided into 42 segments by means of 42 gaps with parallel walls. The pole lines at the electron entrance and exit are curved. A spherical lens aberration was avoided through an appropriate design. The magnet coil embraces the core segments in such a way that the gaps for the passage of the electrons remain free. The whole spectrometer is placed in a vacuum chamber. On the one side of the spectrometer, at the axis of symmetry, there is the sourceholder, on the other side, situated symmetrically, is the anthracene crystal which is connected to the photomultiplier cathode. The focusing properties were

Card 1/2

BERENYI, D.

\* Calculations concerning the difficulties of producing controlled fusion energy. Gendör Szalay and Dénes Berényi. Magyar Tudományos Akad. Műt. és Fiz. Osztályának Közleménye 8, 345-38 (1958).—The feasibility of thermonuclear reactors and their parameters are discussed. The conclusion is that the production of continuous, regulated and economic thermonuclear energy is extremely difficult at the present time. If one considers extreme high  $d_0$  (0.1 g./cc.) one obtains such high radiation losses that the crit. dimensions necessary for equil. are prohibitively large. At the plasma  $d_0$  used in recent expts., the radiation losses are lower but the production of fusion energy is even lower. Disregarding for a moment the difficulties of obtaining extremely high equil. temps. and controlled production, a thermonuclear reactor could be planned by using low plasma  $d_0$  which would have long life and fusion would not occur explosively. The extremely large vol. for low  $d_0$ , however, is a big difficulty. If it is not possible to produce controlled fusion energy, the authors consider the conditions to obtain at least detectable effects. The limit of detection is 100 fissions/l.; this condition has not been established as yet. E. Roman

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RM

Lerényi, D.

GEOGRAPHY & GEOLOGY

Földrajzi Értesítő. Recurrent Feature: Documentation  
Vol. 7, no. 3, 1958

Discussion on crop climate. p. 347.

Monthly List of East European Accessions (DEA1), IS, Vol 8, No. 2,  
February 1959, Unclass.

HUNGARY/Nuclear Physics - Structure and Properties of Nuclei C-4

Abstr Jour : Ref Zhur - Fizika, No 5, 1959, No 10081

Author : Berenyi Denes  
Inst : -

Title : Theory of Beta Decay and Experimental Investigations of the  
Spectra of Forbidden Transitions.

Orig Pub : Magyar fiz. folyoirat, 1958, 6, No 3, 251-259

Abstract : Survey article, devoted to the possibility of determining  
a variant of beta interaction from experimental investigations  
of the spectra of forbidden beta transitions. Starting with  
an analysis of the experimental data the author concludes  
that the most probable are the S, T and V, A variants.

Card : 1/1

BRUNO, G.

BRUNO, G. "Outline of 'headline journalism' of the West." p. 212.

Vol. 6, No. 4, July/Aug. 1956

TRIPALIS

SOIENON

Pudapest, Hungary

See: East European Accession, Vol. 6, No. 3, Feb. 1957

BERENYI, DEVE5

and the USSR. These two models have been used by a number of authors in the USSR and abroad. In the USSR, the models have been used by a number of authors in the USSR and abroad. In the USSR, the models have been used by a number of authors in the USSR and abroad.

BERENYI, D.

BERENYI, D. - Planting soya in strips, p. 5, Vol. 11, no. 13, July 1956 -  
Magyar Mezogazdasag, Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4 - April 1957



DERENYI, JR. D.; SZALAY, S.

Thermonuclear nucleus and the hydrogen bomb. p. 145. Vol. 6, No. 5  
Sept. 1956. FIZIKAI SZEMLE. Budapest, Hungary.

SOURCE: East European List, (EAL) Library of Congress Vol. 6, No. 1  
January 1956.

BERENYI, D.

L. V. Groshev, I. S. Shapiro, and K. Siegbahn's Comprehensive Monographs on Atomic Nucleus Spectroscopy; a book review. p. 604.  
(MAGYAR FIZIKAI FOLYOIRAT, Vol. 4, no. 6, 1950. Budapest, Hungary)

SO: Monthly List of East European Accessions (JAL) 10, Vol. 6, no. 9, Sep. 1957. Unc1.

BERENYI, O.; BEVECZ, I.

Some vacuum-technical solutions and experiences in the construction of a beta spectrometer. p. 553.

(MAGYAR FIZIKAI FOLYOIRAT, Vol 4, no. 6, 1956. Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 9, Sep. 1957. Incl.

HUNGARY / Cultivated Plants. Technical, Oleaceous, Sugar Bearing M-6  
Plants.

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58699

considered during the vegetation period and during October-March, before the vegetation period. The need for moisture in beets increases from March to July. A smaller amount of precipitation and less heat is required (in Hungary) for each weight unit in the crop, when the yield increases. The author considers 210-240 mm as an optimum amount of precipitation for beet crops during the period May-July; the June temperature should be equal to 20° on the average. A formula expressing the dependence of the crop on the temperature, precipitation and the amount of the sunshine is given. -- N. I. Orlovskiy

Card 2/2

HUNGARY / Cultivated Plants. Technical, Oleaceous, Sugar Bearing M-6  
Plants.

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58699

Author : Berenyi, Denes  
Inst : Debrecen University

Title : Interrelation Between the Yield of Sugar Beet and  
Meteorological Factors

Orig Pub : Acta Univ. debrecen., 1956 (1957), 3, No 2, 229-249

Abstract : Temperature and precipitation were taken into  
consideration as parts of meteorological elements.  
The effect of precipitation was the most important.  
The study of the above interrelations was conducted  
by means of the correlation method, as well as by  
using the method of confrontation of yields during  
both the most and least favorable years during the  
period 1924-1938. The meteorological elements were

Card 1/2

BERENYI, D.

Bela Bell's A troposzfera eghajlata Magyarorszag felett (Climate of the Troposphere over Hungary); a book review. p. 184.  
IDOJARAS. Budapest. Vol. 59, no. 3, May/June 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 2  
February 1956

BERENYI, D.

Gamma-ray spectroscopy. p. 167 FIZIKAI SZEMLE (Eotvos Lorand  
Fizikai Tarsulat) Budapest. Vol. 5, no. 6 , Dec. 1955

Source: EEAL - LC Vol 5. No. 10 Oct. 1956

*Hungary*

9 12  
 Observation of unusual radioactivity in rainwater collected in Debrecen from April 22 to December 31, 1952. Sándor Szalay and Dénes Berényi. *Magyar Tudományos Akad. Mat. és Fiz. Tudományok Osztályának Közleményei* 5, No. 2, 89-101 (1955).—Rainwater was concd. and the activity measured in standard flat glass containers, with a thin window Geiger-Müller counter. The geometry was 12.6%. UX<sub>1</sub> was used as a  $\beta$ -standard. A Pb shield, 4 cm. thick, prevented the  $\gamma$ -rays from entering the Geiger-Müller tube. The collected samples showed at certain times a considerable increase in radioactivity, which could be correlated with the detonation of atom bombs in Nevada, May and June, Montebello, October, and Marshall Islands in November, 1952. Without having any precise information, it was surmised that the latter was a H bomb. The radioactivity, followed for a long time, showed several half-lives. S. and B. suggest that they are due to fission products, from the chain reaction, which started the bomb. The av. intensity of the radioactivity was  $10^{-11}$  c. in rainwater fallen on a surface of 0.02 sq. cm. From the time of observation, intensity of the radioactivity, and the distance from the site of detonation, S. and B. attempted to calc. the velocity of wind and the uniform distribution of radioactivity in the atm. B. Rona

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Berényi, D.

551.513 : 551.594.14

10119. Unusual radioactivity observed in the atmospheric precipitation in Debrecen (Hungary) between Apr. 22-Dec. 31, 1952. A. SZALAY AND D. BERÉNYI. Acta phys. Hungar., 5, No. 1, 1-14 (1955).

The authors investigated, by means of an end-window  $\beta$ -counter tube equipment the activity of precipitation fallen in Debrecen between April 22 and December 31, 1952. At times the precipitations showed radioactivity, which proved to be due to fission products deriving from atomic explosions. These anomalous activities, with a lag of a few days, were in correlation of time with the atomic explosions published during the same period. The order of magnitude of the activity calculated for a precipitation of an area of 1/50 sq mcms was  $10^{-11}$  Curie. Calculating this figure to the whole surface of earth it

appears obvious that this activity refers to the average value of activity of the whole surface or possibly of the northern hemisphere of the earth rather than to the activity of air masses incidentally drifted here. It appears from the investigations that by using an equipment of adequate sensitivity the fission products of an atomic bomb may be registered even at very considerable distances. The authors are of the opinion that by systematic and internationally organized observations of air masses to which activity had been imparted by way of atomic explosions or in any other way, the problems of general circulation, the movement of air masses and their interchanges between the two hemispheres could be most efficiently studied and thereby the solution of the most recent problems of meteorology approached. A. ①

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REF ID: A66888

1. RESEARCH - The study of the past to learn about the present and future. It involves the collection, analysis, and interpretation of data.

2. THEORY - A set of ideas or principles that explain a phenomenon. It is based on research and is used to guide further research.

3. METHODS - The techniques and procedures used to collect and analyze data. They are designed to ensure the reliability and validity of the research.

4. DATA - The information collected during the research process. It can be in the form of numbers, text, or images.

5. ANALYSIS - The process of examining the data to identify patterns and relationships. It involves using statistical and other analytical tools.

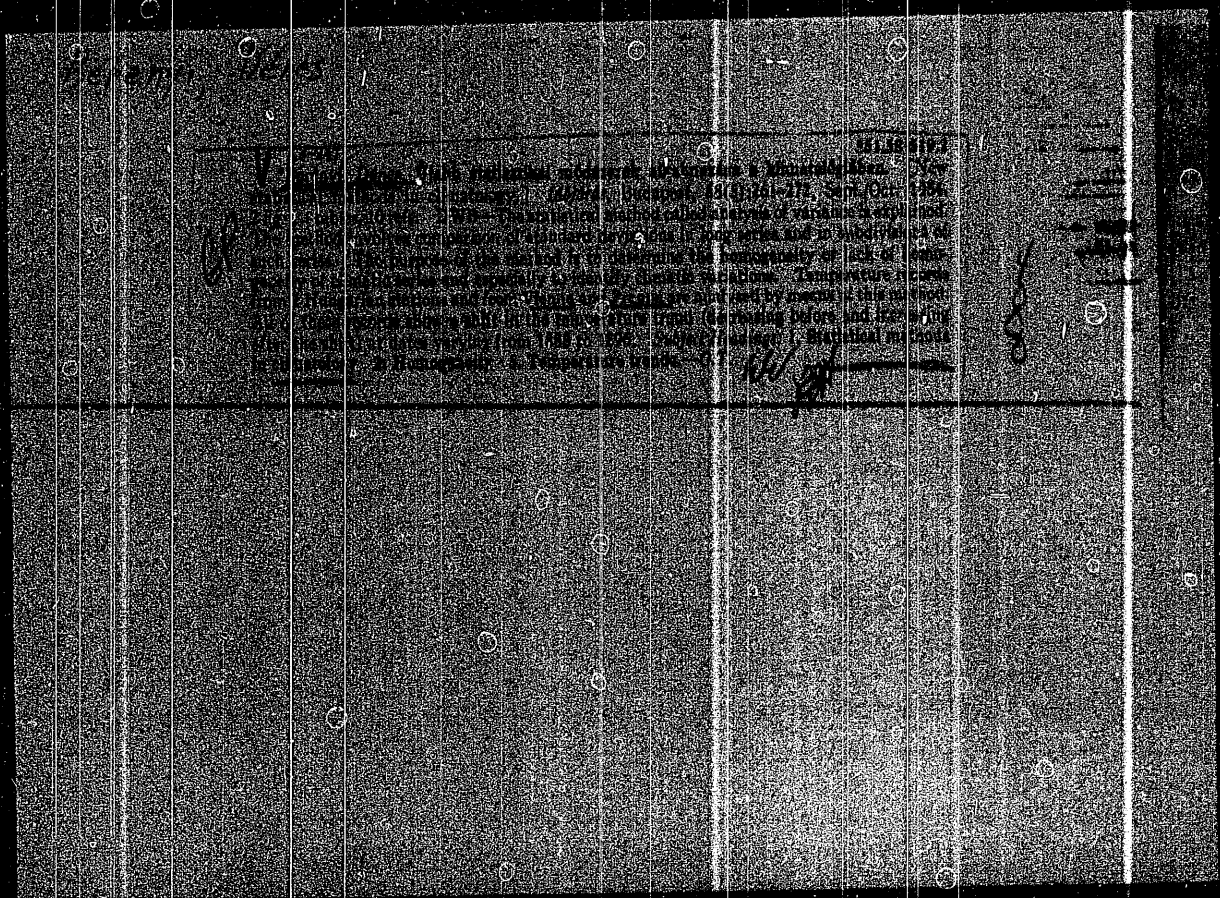
6. INTERPRETATION - The process of making sense of the data and drawing conclusions. It involves using the data to answer the research question.

7. CONCLUSIONS - The final results of the research. They are based on the data and the analysis and are used to answer the research question.

8. DISCUSSION - The process of sharing the results of the research with others. It involves writing a report or paper and presenting the findings.

9. REVISION - The process of making changes to the research based on feedback. It is an important part of the research process.

10. FINAL REPORT - The final document that summarizes the research. It includes the introduction, methods, results, and conclusions.



BRUNNEN, P.

"Remarks on the Annual Averages of Several Years of Rainfall", p. 310.  
(IDOMIAS, Vol. 57, No. 4, Nov./Dec. 1953, Budapest, Hungary)

SO: Monthly List of Post European Accessions, (CEI), 10. Vol. 4,  
No. 1, Jan. 1955, Incl.

BERENYI, D.

"The Weather and Agricultural Production in the Mirror of Today's Science".  
p.65, (IDOJARS, Vol. 57, No. 2, Mar./ Apr. 1953, Budapest, Hungary).

SO: Monthly List of East European Accessions, L. C., Vol. 2, No. 11, Nov. 1953  
Uncl.

BERENYI, D.

gno(2)

Meteorological Abst.

Vol. 4 No. 6

June 1953

Meteorological

Observations and Instruments

4.6-29

551.501.1(02)

Berenyi, De'nes. Utmutatás a meteorológiai megfigyelésekre. [Instructions for meteorological observation.] Időjárás, 56(5/6):188-189, May/June 1952. DWB—Review of the third, enlarged edition of the Hungarian Meteorological Institute's official "Instructions." The first edition was issued in 1911, the second in 1945. In the new edition, additions were made to the section containing instructions for the observation of rainfall, and instructions for observation of soil condition have been included. The manual is based on international standards with some modifications on account of peculiar conditions in Hungary. *Subject Headings:* 1. Instruction for observers 2. Observers manuals.—G.T.

BERENYI, DEVES

Meteorological Abst.  
Vol. 5 No. 1  
Jan. 1954  
Part I  
Works of Special  
Interest

✓ 51-1 ✓ 551.5:61(02) 551.582(439.1)  
✓ \*Aujesky, László; Berényi, Dénes and Bell, Béla, *Mezőgazdasági meteorológia; Az agrometeorológiai ismeretek kézikönyve*. [Agricultural meteorology; an agrometeorological handbook.] Budapest, Akadémiai Kiadó, 1951. 550 p. 300 illus. refs. **DLC**--This text is intended for the general reading public, the college student and the research scientist as well. It comprises a useful handbook of meteorology, climatology and their agricultural applications, especially for those working on Central European crop ecology. In Pt. 1 (p. 15-271) basic information on meteorological elements, meteorological research, atmospheric dynamics, climatology and world climate is presented in a clear and analytical manner. A special section deals with the climate of Hungary (illustrated with numerous climatic charts). Pt. 2 (p. 275-417) deals with atmospheric phenomena and climatic factors from the point of view of their effect on the development of plants; with weather requirements of plants at various stages of their development, with microclimate and with the utilization of meteorological information for agricultural purposes. Pt. 3 (p. 421-541) contains data on the ecology of 17 principal crops grown in Hungary. It also includes a chapter on the dependence of growing climate on soil properties and one on forest climate. The use of this extensive study as a reference book is facilitated by a subject index. *Subject Headings:* 1. Meteorology 2. Climate of Hungary 3. Agricultural meteorology 4. Plant ecology 5. Textbooks 6. Hungary.--G.T.

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| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  | 3RD AND 4TH ORDERS   |  |  |  |  |  |  |  |  |  |
| PROCESSING AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  | 1ST AND 2ND ORDERS   |  |  |  |  |  |  |  |  |  |
| <p>DEBENYI, D.</p> <p>AMS/A+B</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |  |  | <p>JUL 1951</p>      |  |  |  |  |  |  |  |  |  |
| <p>2.7-B</p> <p>*Debenyi, D. [Hung.]. További vizslatok az időjárás elemek közötti kapcsolatokkal. [Additional investigation on the correlation of meteorological elements.] <i>Időjárás</i>. 53(11-12):318-354, Nov.-Dec. 1949. 7 tables, 6 refs., equations. French summary p. 405. MH-BH. Chapters IV-VII of an article on the theory and practice of correlating pressure, temperature, etc. between various months or various years, where long series of records exist. Examples are given from records at Budapest, Stockholm, Berlin, Moscow, Vienna, Paris, etc. Subject Heading: Correlations.--M.R.</p> |  |  |  |  |  |  |  |  |  | <p>531.5:519.272</p> |  |  |  |  |  |  |  |  |  |
| <p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | <p>2x2+1</p>         |  |  |  |  |  |  |  |  |  |



ROMANIA

AGARBICEANU, I., Corresponding Member of the Academy of the Romanian  
People's Republic; BERANCI, C.; TEODORSCU, G.; CHILIMEL, M.

Bucharest, Comunicarile Academiei Republicii Populare Romane,  
Vol XIII, No 12, 1963, pp 1051-1053

"Elements Present in Solid Suspensions of the Atmosphere."  
(Report presented at the meeting of 29 June 1963.)

(9)

BERENYI, Bela, az orvostudományok kandidátusa, egyetemi docens

"Dental pathology" by Sándor Boros. Reviewed by Bela Berenyi.  
Magy tud 70 no.2:151 F '63.

1. Központi Stomatológiai Intézet.

\*

EXCERPTA MEDICA, Sec 9 Vol 13/8 Surgery August 59

4390. PLASTIC GRAFT FOR TREATMENT OF HABITUAL DISLOCATION OF  
THE LOWER JAW - Kunststoffimplantat zur Behebung der habituellen  
Unterkiefersubluxation - Berényi B., and Gyenes W. Stomatol. Univ.-  
Klin., Budapest - ÖST. Z. STOMAT. 1958, 55/3 (135-140) Illus. 6

When conservative treatment has failed, extracapsular surgery is recommended  
for treatment of habitual mandibular dislocation. The elevation preventing the pro-  
trusion of the head before the tuberculum articulare can be made of plastic.

(IX, 19\*)

PASTINSZKY, Istvan, dr.; BERENYI, Bela, dr.

Stomatological syndromatology. Fogorv. szemle 47 no.10:305-311  
Oct 54.

1. A Magyar Nephadsereg Hu. Szolgálatának közleménye.  
(MOUTH, in various dis.  
manifest. of various synd.)

BERENYI, B. 1947

"Trends in Preventive Dintistry."

Fogorvosi Szemel, Budapest, 1947, 40/8(225-239)  
Abst: Exc. Med. IV, Vol. 11, No. 4, p. 460

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800038-6

BERENYI, B.

Dr. Gyorgy Kovacs (1900-1965). Fogarv. nzele 58 no.10:  
315-316 0 '65.

BERENYI, Alajos, dr.

Modern hygienic garbage disposal and public health requirements.  
Nepegeszseguy 38 no.1-2:41-45 Jan-Feb 57.

1. Allami kozegeszsegugyi felugyelo.  
(SANITATION  
garbage disposal, pub. health requirements (Hun))

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VARDAY, Gyorgy, dr.; BICZOK, Imre; OCSVAR, Rezső; LAJTOS, Zoltan; SZIMELY, Karoly; BERENYI, Akos, dr.; FEHER, Gyula; GALLI, László; BAKOS, László; CZIGLINA, Vilmos; GABOS, Gyorgy; SZILAGYI, Gyula; RONAI, Andras; KOVACS, Gyorgy; BACHMANN, Alfred; STEGMULLER, Jozsef; RETHATI, László; NAGY, Zoltan.

Hydrological questions of the construction industry in Hungary.  
Hidrologiai kozlony 36 no.3:169-170 Je'56.

1. "Hidrologiai Kozlony" szerkeszto bizottsagi tagja (for Galli).
2. "Hidrologiai Kozlony" felelos szerkesztoje (for Kovacs).



100051, Jena; 081001, Jena

Extensive utilization of film assets in the film industry, Jena  
Apr 18 no.11: 346-353 N '64.

1. Institute of Food Industry Economics and Legislation, Jena.
2. Editorial board member, "Telegraph" Jena (Apr 1964).

PLESHKOVA, S.A.; BERENTSVEYG, Yu.M.; OSIPYANTS, L.P.; RATNER, M.M.;  
STEFANOVICH, G.P. (Sverdlovsk).

Care of patients suffering from diseases with a protracted  
course. Zdrav. Ros. Feder. 7 no.9:16-18 S '63. (MIRA 16:10)

DENSHCHIKOV, M.T.; RYLKIN, S.S.; ZHVIRBLYANSKAYA, A.Yu.; MOISEYEVA, V.P.;  
HERENTSVEYG, I.A.; BOBIKOV, Ye.V.

Role of diacetyl on the vitality of sedimentary brewers' yeasts.  
Trudy TSentr.nauch.-issl.inst.piv., bezalk.i vin.prom.no.11:16-27 '63.  
(MIRA 17:9)

BERENTSVEYG, B.V.

Greater volumes of earthwork using hydromechanical methods. Mekh.  
trud.rab. 9 no.12:22-24 D '55. (MLRA 9:5)

1. Zamestitel' glavnogo inzhenera Kuybyshevskogo upravleniya  
Gidromekhanizatsii.  
(Hydraulic engineering) (Earthwork)

MIROSHNICHENKO, Yu.P.; KONOVALOV, V.I.; BERENTS, Yu.Ya.

Field investigation of the cooling of a well bore and measures  
for preventing corrosion of underground equipment, Neft. khoz.  
42 no.7:42-45 J1 '64. (MIRA 17:8)

L 17620-66 EWT(m)/EWP(j)/T DJ/RM

ACC NR: AP6007673

(A)

SOURCE CODE: UR/0413/66/000/003/0044/0044

INVENTOR: Berents, L. I.; Gavriilyuk, A. D.; Derbaremdiker, A. D.; Vinner, G. G.;  
Abramovich, S. Sh.; Novosartov, G. T.; Novichkov, A. M.

ORG: none

TITLE: Preparative method for hydraulic fluids. Class 23, No. 178439

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 44

TOPIC TAGS: hydraulic fluid, petroleum base hydraulic fluid, antiwear additive, antioxidant additive

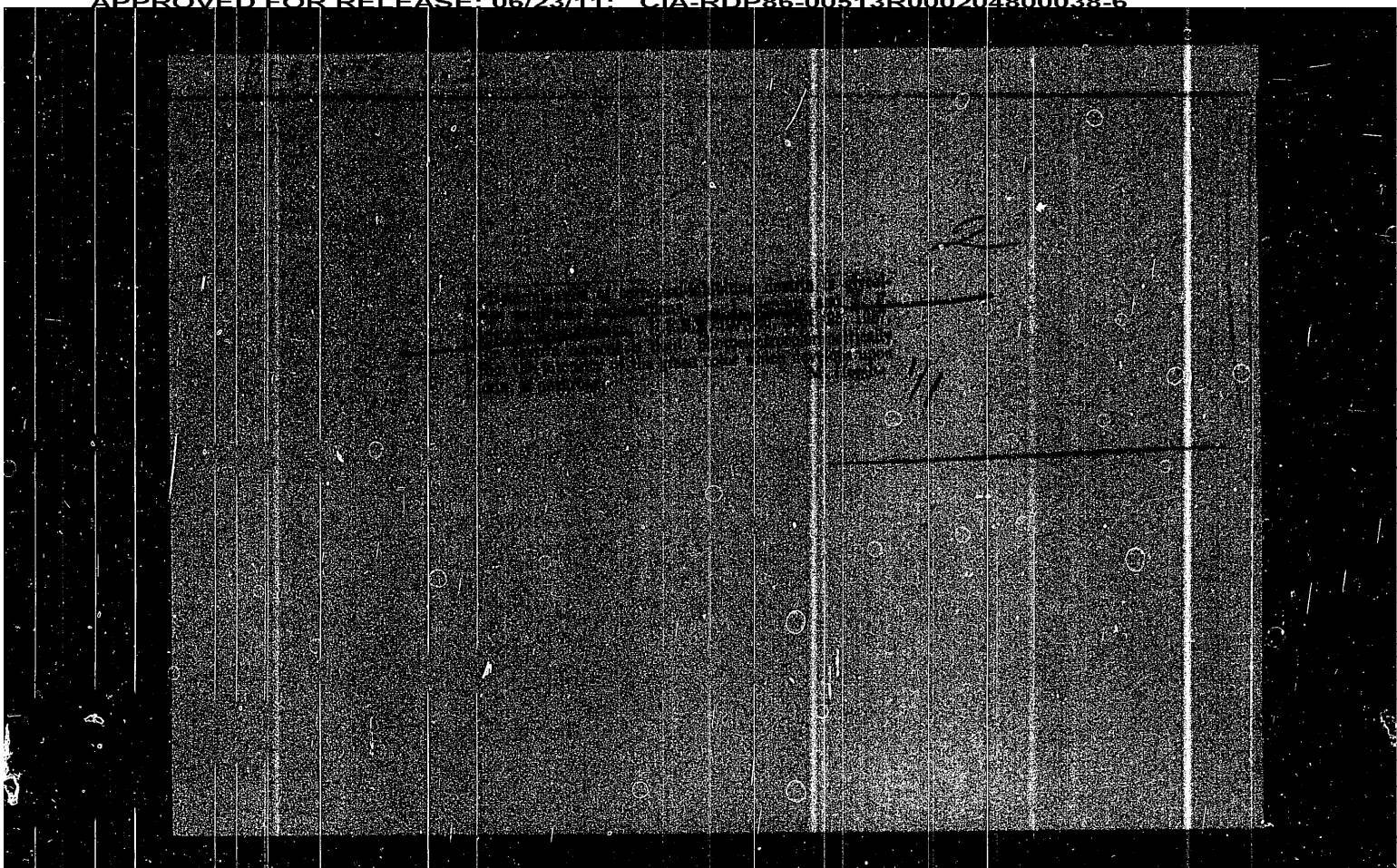
ABSTRACT: An Author Certificate has been issued for a preparative method for petroleum base hydraulic fluid containing antiwear and antioxidant additives. The residual fraction of transformer oil, with a viscosity of 10.3—10.5 cs at 50C, is used as the petroleum base. Ethylpolysiloxane liquid<sup>5</sup> (mol. wt., 1500—1700) or a composition of Sovol, diphenylamine and Ionol are used as the additives. [BO]

SUB CODE: 11/ SUBM DATE: 21Nov64/ ATD PRESS: 4/8/64

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UDC: 621.892.86:621.225

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| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1ST AND 2ND ORDERS      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PRECEDENCE AND PRIORITY                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PRECEDENCE AND PRIORITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>CA</p> <p>Desulfurizing benzines, ligroins and Diesel fuels.<br/> L. I. Berents, N. V. Ershov and M. A. Karamovskaya.<br/> <i>Bull. Acad. Sci. U. R. S. S. R. Chem. Ser.</i> 1942, No. 3, 1,<br/> 11-18. Bauxites of various U. S. S. R. regions can remove<br/> active S compds. from petroleum fuels. The process is<br/> performed at 300-400°, with subsequent regeneration of<br/> bauxite by air blowing. G. M. Kosolapoff</p> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| COMMON ELEMENTS                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | COMMON ELEMENTS         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| OPEN                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | OPEN                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NATURALLY INDEXED                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | NATURALLY INDEXED       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AUTHOR INDEX                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | AUTHOR INDEX            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1ST AND 2ND ORDERS      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PRECEDENCE AND PRIORITY                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PRECEDENCE AND PRIORITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1ST AND 2ND ORDERS      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PRECEDENCE AND PRIORITY                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PRECEDENCE AND PRIORITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



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PROCESSES AND PROPERTIES INDEX

**Influence of benzite on sulphur compounds contained in petroleum fractions.** L. I. Derents and A. V. Frost (Compt. rend. Acad. Sci. U.R.S.S., 1968, 28, 190-198).—Various samples of benzite (I), activated by heating in air, have been found to remove  $\text{D}_2\text{S}$  and  $\text{D}_2\text{S}_2$  and less readily thiophen, from gasoline when a slow stream of the vapour of the latter was passed over them. The most active sample removed 65-80% of the S from natural gasolines and ligroins, in which the S is present as open-chain compounds, but only 60-70% of the S from thermally-produced gasoline, which contains cyclic S compounds. No  $\text{H}_2\text{S}$  is formed.  $\text{SO}_2$  is evolved during regeneration of the (I) in air, and  $\text{H}_2\text{S}$  during regeneration in steam.

J. W. S.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

| SECTION | SUBSECTION | TOPIC | DATE | REMARKS |
|---------|------------|-------|------|---------|
| 1       | 1          | 1     | 1    | 1       |
| 2       | 2          | 2     | 2    | 2       |
| 3       | 3          | 3     | 3    | 3       |
| 4       | 4          | 4     | 4    | 4       |
| 5       | 5          | 5     | 5    | 5       |
| 6       | 6          | 6     | 6    | 6       |
| 7       | 7          | 7     | 7    | 7       |
| 8       | 8          | 8     | 8    | 8       |
| 9       | 9          | 9     | 9    | 9       |
| 10      | 10         | 10    | 10   | 10      |
| 11      | 11         | 11    | 11   | 11      |
| 12      | 12         | 12    | 12   | 12      |
| 13      | 13         | 13    | 13   | 13      |
| 14      | 14         | 14    | 14   | 14      |
| 15      | 15         | 15    | 15   | 15      |
| 16      | 16         | 16    | 16   | 16      |
| 17      | 17         | 17    | 17   | 17      |
| 18      | 18         | 18    | 18   | 18      |
| 19      | 19         | 19    | 19   | 19      |
| 20      | 20         | 20    | 20   | 20      |
| 21      | 21         | 21    | 21   | 21      |
| 22      | 22         | 22    | 22   | 22      |
| 23      | 23         | 23    | 23   | 23      |
| 24      | 24         | 24    | 24   | 24      |
| 25      | 25         | 25    | 25   | 25      |
| 26      | 26         | 26    | 26   | 26      |
| 27      | 27         | 27    | 27   | 27      |
| 28      | 28         | 28    | 28   | 28      |
| 29      | 29         | 29    | 29   | 29      |
| 30      | 30         | 30    | 30   | 30      |
| 31      | 31         | 31    | 31   | 31      |
| 32      | 32         | 32    | 32   | 32      |
| 33      | 33         | 33    | 33   | 33      |
| 34      | 34         | 34    | 34   | 34      |
| 35      | 35         | 35    | 35   | 35      |
| 36      | 36         | 36    | 36   | 36      |
| 37      | 37         | 37    | 37   | 37      |
| 38      | 38         | 38    | 38   | 38      |
| 39      | 39         | 39    | 39   | 39      |
| 40      | 40         | 40    | 40   | 40      |
| 41      | 41         | 41    | 41   | 41      |
| 42      | 42         | 42    | 42   | 42      |
| 43      | 43         | 43    | 43   | 43      |
| 44      | 44         | 44    | 44   | 44      |
| 45      | 45         | 45    | 45   | 45      |
| 46      | 46         | 46    | 46   | 46      |
| 47      | 47         | 47    | 47   | 47      |
| 48      | 48         | 48    | 48   | 48      |
| 49      | 49         | 49    | 49   | 49      |
| 50      | 50         | 50    | 50   | 50      |
| 51      | 51         | 51    | 51   | 51      |
| 52      | 52         | 52    | 52   | 52      |
| 53      | 53         | 53    | 53   | 53      |
| 54      | 54         | 54    | 54   | 54      |
| 55      | 55         | 55    | 55   | 55      |
| 56      | 56         | 56    | 56   | 56      |
| 57      | 57         | 57    | 57   | 57      |
| 58      | 58         | 58    | 58   | 58      |
| 59      | 59         | 59    | 59   | 59      |
| 60      | 60         | 60    | 60   | 60      |
| 61      | 61         | 61    | 61   | 61      |
| 62      | 62         | 62    | 62   | 62      |
| 63      | 63         | 63    | 63   | 63      |
| 64      | 64         | 64    | 64   | 64      |
| 65      | 65         | 65    | 65   | 65      |
| 66      | 66         | 66    | 66   | 66      |
| 67      | 67         | 67    | 67   | 67      |
| 68      | 68         | 68    | 68   | 68      |
| 69      | 69         | 69    | 69   | 69      |
| 70      | 70         | 70    | 70   | 70      |
| 71      | 71         | 71    | 71   | 71      |
| 72      | 72         | 72    | 72   | 72      |
| 73      | 73         | 73    | 73   | 73      |
| 74      | 74         | 74    | 74   | 74      |
| 75      | 75         | 75    | 75   | 75      |
| 76      | 76         | 76    | 76   | 76      |
| 77      | 77         | 77    | 77   | 77      |
| 78      | 78         | 78    | 78   | 78      |
| 79      | 79         | 79    | 79   | 79      |
| 80      | 80         | 80    | 80   | 80      |
| 81      | 81         | 81    | 81   | 81      |
| 82      | 82         | 82    | 82   | 82      |
| 83      | 83         | 83    | 83   | 83      |
| 84      | 84         | 84    | 84   | 84      |
| 85      | 85         | 85    | 85   | 85      |
| 86      | 86         | 86    | 86   | 86      |
| 87      | 87         | 87    | 87   | 87      |
| 88      | 88         | 88    | 88   | 88      |
| 89      | 89         | 89    | 89   | 89      |
| 90      | 90         | 90    | 90   | 90      |
| 91      | 91         | 91    | 91   | 91      |
| 92      | 92         | 92    | 92   | 92      |
| 93      | 93         | 93    | 93   | 93      |
| 94      | 94         | 94    | 94   | 94      |
| 95      | 95         | 95    | 95   | 95      |
| 96      | 96         | 96    | 96   | 96      |
| 97      | 97         | 97    | 97   | 97      |
| 98      | 98         | 98    | 98   | 98      |
| 99      | 99         | 99    | 99   | 99      |
| 100     | 100        | 100   | 100  | 100     |

| 1ST AND 2ND ORDERS |  |  |  |  |  |  |  |  |  | PROCESSING AND PROPERTIES INDEX |  |  |  |  |  |  |  |  |  | 3RD AND 4TH ORDERS |  |  |  |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|--|--|---------------------------------|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|
| A                  |  |  |  |  |  |  |  |  |  | B                               |  |  |  |  |  |  |  |  |  | C                  |  |  |  |  |  |  |  |  |  |
| D                  |  |  |  |  |  |  |  |  |  | E                               |  |  |  |  |  |  |  |  |  | F                  |  |  |  |  |  |  |  |  |  |
| G                  |  |  |  |  |  |  |  |  |  | H                               |  |  |  |  |  |  |  |  |  | I                  |  |  |  |  |  |  |  |  |  |
| J                  |  |  |  |  |  |  |  |  |  | K                               |  |  |  |  |  |  |  |  |  | L                  |  |  |  |  |  |  |  |  |  |
| M                  |  |  |  |  |  |  |  |  |  | N                               |  |  |  |  |  |  |  |  |  | O                  |  |  |  |  |  |  |  |  |  |
| P                  |  |  |  |  |  |  |  |  |  | Q                               |  |  |  |  |  |  |  |  |  | R                  |  |  |  |  |  |  |  |  |  |
| S                  |  |  |  |  |  |  |  |  |  | T                               |  |  |  |  |  |  |  |  |  | U                  |  |  |  |  |  |  |  |  |  |
| V                  |  |  |  |  |  |  |  |  |  | W                               |  |  |  |  |  |  |  |  |  | X                  |  |  |  |  |  |  |  |  |  |
| Y                  |  |  |  |  |  |  |  |  |  | Z                               |  |  |  |  |  |  |  |  |  | AA                 |  |  |  |  |  |  |  |  |  |
| AB                 |  |  |  |  |  |  |  |  |  | AC                              |  |  |  |  |  |  |  |  |  | AD                 |  |  |  |  |  |  |  |  |  |
| AE                 |  |  |  |  |  |  |  |  |  | AF                              |  |  |  |  |  |  |  |  |  | AG                 |  |  |  |  |  |  |  |  |  |
| AH                 |  |  |  |  |  |  |  |  |  | AI                              |  |  |  |  |  |  |  |  |  | AJ                 |  |  |  |  |  |  |  |  |  |
| AK                 |  |  |  |  |  |  |  |  |  | AL                              |  |  |  |  |  |  |  |  |  | AM                 |  |  |  |  |  |  |  |  |  |
| AN                 |  |  |  |  |  |  |  |  |  | AO                              |  |  |  |  |  |  |  |  |  | AP                 |  |  |  |  |  |  |  |  |  |
| AQ                 |  |  |  |  |  |  |  |  |  | AR                              |  |  |  |  |  |  |  |  |  | AS                 |  |  |  |  |  |  |  |  |  |
| AT                 |  |  |  |  |  |  |  |  |  | AU                              |  |  |  |  |  |  |  |  |  | AV                 |  |  |  |  |  |  |  |  |  |
| AW                 |  |  |  |  |  |  |  |  |  | AX                              |  |  |  |  |  |  |  |  |  | AY                 |  |  |  |  |  |  |  |  |  |
| AZ                 |  |  |  |  |  |  |  |  |  | BA                              |  |  |  |  |  |  |  |  |  | BB                 |  |  |  |  |  |  |  |  |  |
| BC                 |  |  |  |  |  |  |  |  |  | BD                              |  |  |  |  |  |  |  |  |  | BE                 |  |  |  |  |  |  |  |  |  |
| BF                 |  |  |  |  |  |  |  |  |  | BG                              |  |  |  |  |  |  |  |  |  | BH                 |  |  |  |  |  |  |  |  |  |
| BI                 |  |  |  |  |  |  |  |  |  | BJ                              |  |  |  |  |  |  |  |  |  | BK                 |  |  |  |  |  |  |  |  |  |
| BL                 |  |  |  |  |  |  |  |  |  | BM                              |  |  |  |  |  |  |  |  |  | BN                 |  |  |  |  |  |  |  |  |  |
| BO                 |  |  |  |  |  |  |  |  |  | BP                              |  |  |  |  |  |  |  |  |  | BQ                 |  |  |  |  |  |  |  |  |  |
| BR                 |  |  |  |  |  |  |  |  |  | BS                              |  |  |  |  |  |  |  |  |  | BT                 |  |  |  |  |  |  |  |  |  |
| BU                 |  |  |  |  |  |  |  |  |  | BV                              |  |  |  |  |  |  |  |  |  | BW                 |  |  |  |  |  |  |  |  |  |
| BX                 |  |  |  |  |  |  |  |  |  | BY                              |  |  |  |  |  |  |  |  |  | BZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CS                 |  |  |  |  |  |  |  |  |  | CT                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  | CG                              |  |  |  |  |  |  |  |  |  | CG                 |  |  |  |  |  |  |  |  |  |
| CH                 |  |  |  |  |  |  |  |  |  | CH                              |  |  |  |  |  |  |  |  |  | CH                 |  |  |  |  |  |  |  |  |  |
| CI                 |  |  |  |  |  |  |  |  |  | CI                              |  |  |  |  |  |  |  |  |  | CI                 |  |  |  |  |  |  |  |  |  |
| CJ                 |  |  |  |  |  |  |  |  |  | CJ                              |  |  |  |  |  |  |  |  |  | CJ                 |  |  |  |  |  |  |  |  |  |
| CK                 |  |  |  |  |  |  |  |  |  | CK                              |  |  |  |  |  |  |  |  |  | CK                 |  |  |  |  |  |  |  |  |  |
| CL                 |  |  |  |  |  |  |  |  |  | CL                              |  |  |  |  |  |  |  |  |  | CL                 |  |  |  |  |  |  |  |  |  |
| CM                 |  |  |  |  |  |  |  |  |  | CM                              |  |  |  |  |  |  |  |  |  | CM                 |  |  |  |  |  |  |  |  |  |
| CN                 |  |  |  |  |  |  |  |  |  | CN                              |  |  |  |  |  |  |  |  |  | CN                 |  |  |  |  |  |  |  |  |  |
| CO                 |  |  |  |  |  |  |  |  |  | CO                              |  |  |  |  |  |  |  |  |  | CO                 |  |  |  |  |  |  |  |  |  |
| CP                 |  |  |  |  |  |  |  |  |  | CP                              |  |  |  |  |  |  |  |  |  | CP                 |  |  |  |  |  |  |  |  |  |
| CQ                 |  |  |  |  |  |  |  |  |  | CQ                              |  |  |  |  |  |  |  |  |  | CQ                 |  |  |  |  |  |  |  |  |  |
| CR                 |  |  |  |  |  |  |  |  |  | CR                              |  |  |  |  |  |  |  |  |  | CR                 |  |  |  |  |  |  |  |  |  |
| CU                 |  |  |  |  |  |  |  |  |  | CU                              |  |  |  |  |  |  |  |  |  | CU                 |  |  |  |  |  |  |  |  |  |
| CV                 |  |  |  |  |  |  |  |  |  | CV                              |  |  |  |  |  |  |  |  |  | CV                 |  |  |  |  |  |  |  |  |  |
| CW                 |  |  |  |  |  |  |  |  |  | CW                              |  |  |  |  |  |  |  |  |  | CW                 |  |  |  |  |  |  |  |  |  |
| CX                 |  |  |  |  |  |  |  |  |  | CX                              |  |  |  |  |  |  |  |  |  | CX                 |  |  |  |  |  |  |  |  |  |
| CY                 |  |  |  |  |  |  |  |  |  | CY                              |  |  |  |  |  |  |  |  |  | CY                 |  |  |  |  |  |  |  |  |  |
| CZ                 |  |  |  |  |  |  |  |  |  | CZ                              |  |  |  |  |  |  |  |  |  | CZ                 |  |  |  |  |  |  |  |  |  |
| CA                 |  |  |  |  |  |  |  |  |  | CA                              |  |  |  |  |  |  |  |  |  | CA                 |  |  |  |  |  |  |  |  |  |
| CB                 |  |  |  |  |  |  |  |  |  | CB                              |  |  |  |  |  |  |  |  |  | CB                 |  |  |  |  |  |  |  |  |  |
| CC                 |  |  |  |  |  |  |  |  |  | CC                              |  |  |  |  |  |  |  |  |  | CC                 |  |  |  |  |  |  |  |  |  |
| CD                 |  |  |  |  |  |  |  |  |  | CD                              |  |  |  |  |  |  |  |  |  | CD                 |  |  |  |  |  |  |  |  |  |
| CE                 |  |  |  |  |  |  |  |  |  | CE                              |  |  |  |  |  |  |  |  |  | CE                 |  |  |  |  |  |  |  |  |  |
| CF                 |  |  |  |  |  |  |  |  |  | CF                              |  |  |  |  |  |  |  |  |  | CF                 |  |  |  |  |  |  |  |  |  |
| CG                 |  |  |  |  |  |  |  |  |  |                                 |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |

BERENTS/L818

600

1. BERENTS, L.I.

2. USSR (600)

"Question of the Monomolecular Character of the Breakdown of Octane and Isooctane Mixtures,"  
Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk No. 8, 1940. Institute Mineral Fuels, Academy  
of Science, USSR, Submitted 11 May 1950.

9. ~~SECRET~~ Report U-1530, 25 Oct 1951

DA

10

PROCESSES AND PROPERTIES INDEX

Influence of alkyl iodides upon the decomposition of cyclohexano. L. I. Berents and A. V. Frost. *Compt. rend. acad. sci. U. R. S. S.* 24, 883-5 (1939) (in English). At 580°, in a SiO<sub>2</sub> tube and approx. 11 sec. reaction time, I catalyzed the decompn. of C<sub>6</sub>H<sub>12</sub>, the max. effect having been obtained with 0.17% I. The unsatn. of the liquid product, as measured by the Br no., paralleled approx. the increase in amt. of gas issuing from the reaction tube. In *expt.* under the above conditions and also at 600° and approx. 13 sec. reaction time, alkyl iodides markedly increased the decompn. of C<sub>6</sub>H<sub>12</sub>, the effect decreasing in the following order for the various alkyl radicals: Me > Et > Pr > iso-Pr. The relative positions of the latter 2 radicals are not in accordance with the theory of Frost (C. A. 33, 843). Pyrolysis of MeI-C<sub>6</sub>H<sub>12</sub> mixts. in the presence of Na indicated that the effect of Na is approx. additive. George Ayers

OPEN

ASAC-15A METALLURGICAL LITERATURE CLASSIFICATION

The vapor-phase oxidation cracking of petroleum products. L. I. Berents and V. E. Gudneva. *Bull. acad. sci. U. R. S. S., Classe sci. tech.* 1939, No. 3, 85-100; *Khim. Referat. Zhur.* 1939, No. 11, 104-2.—Oxidation cracking of gasoline was studied in an iron lab. app. of 400-cc. capacity and in a large-scale lab. equipment (8000 cc.). An increase of the concn. of O in the mixt. leads to an increase of the velocity of the reaction. The reaction is of the 1st order. Energies of activation were detd. In oxidation cracking a greater transformation of hydrocarbons and a more aromatization are obtained at lower than at higher temps. W. R. Henn

KRECHKO, A.A.; VOL'-EPSHTEYN, A.B.; MUKHINA, T.N.; BERENTS, A.D.

Production of aromatic hydrocarbons from pyrocondensate. Khim.i  
tekh.topl. i masel 10 no.1:9-11 Ja '65.

(MIRA 18:4)

1. Institut goryuchikh iskopayemykh i Nauchno-issledovatel'skiy  
institut sinteticheskikh spirtov i organicheskikh produktov.

BERENTEY, Gyorgy, dr.

Surgical treatment of fractures occurring in metastases of malignant tumors. Magy sebesz. 17 no.4:200-205 Ag '64.

1. A Budapesti Orvostudományi Egyetem I. sz. sebesseti klinikája (Igazgató: Rubanyi Pál dr. egyetemi tanár).

BERENTY, G. DR.

SOMOGYI, Szilveszter, Dr.; BERENTY, Gyorgy, Dr.; FORGACS, Istvan, Dr.

Unusual dislocations of the tarsal bones. Magy. sebeszet 10 no.5-6:  
333-338 Oct-Dec 57.

1. Az Orszagos Traumatologiai Intezet (igazgato: Kudasz Jozsef Dr.  
egyetemi tanar) es a II. sz. Sebeszeti Klinika (igazgato: Rubanyi Pal  
dr. egyetemi tanar) Kozlemenye.

(ANKLE, disloc.

unusual cases (Hun))

(METATARSUS, disloc.

same)



BERENTY, Gyorgy, Dr.

Radical elbow dislocations associated with medial epicondylar fractures.  
Orv. hetil. 98 no.43:1186-1190 27 Oct 57.

1. A Budapesti Orvostudományi Egyetem II. sz. Sebészeti Klinikájának  
(igazgató: Rubanyi Pál dr. egyet. tanár) közleménye.

(ELBOW, fract.

medial epicondylar fract. with radical disloc., diag.  
& ther. aspects (Hun))

2765

CONT.

surgical and conservative treatment should be made after careful and individual consideration of the type of fracture and the general condition.

EXCERPTA MEDICA Sec.9 Vol.11/5 Surgery May 1957  
 BERENTEY Gy

2165. (421) BERENTEY Gy. Unfallchir. Inst. und H. Chir. Klin., Budapest Med. Univ. \*Chirurgische Behandlung der pertrochanteren Brüche. Surgical treatment of pertrochanteric fractures ZBL. CHIR. 1956, 81/27 (1122-1133) Tables 4 Illus. 9

After many years of experiments, various types of nailing have been employed since 1953. The results allow the conclusion that nowadays, in cases of pertrochanteric fracture, operative treatment should always be considered. Advanced age is no contra-indication, since the operative stress hardly exceeds that of nailing of the femoral neck. When the decision of operation has been taken, the straight medullary nail is recommended in fracture types I and II, and also in type III with an intact lesser trochanter; this operation is simple and can quickly be carried out without special equipment. In comminuted fracture and type IV, fixation is better ensured by a non-corroding, combined nail, which is perfect from a static-mechanical viewpoint. Favourable experience was also obtained with vitallium nails and with the Hungarian steel nails. Neither the literature, nor personal experience have shown that the mortality of pertrochanteric fractures was considerably reduced by operative treatment. Correct statistical analyses demonstrate that the total mortality is hardly influenced. The time of hospitalization is considerably reduced by the operation. The greatest advantage of surgical treatment is that after the relatively limited operation, definite functional recovery takes about as much time as fixation in conservative treatment. In the majority of the cases treated by the author, the condition and mobility present before the accident were restored within 90 days. The correct choice between

BERENTHY, Gyorgy, dr.; SOMOGYI, Szilveszter, dr.; FORGACS, Istvan, dr.;  
SARLOS, Pal, dr.

Results in conservative therapy of fractured legs. Orv. hetil.  
97 no.5:128-133 29 Jan 56.

1 A Budapesti Orvos. Egyetem Egyetemi Baleseti Sebészeti  
Intézetének (igaz.: Rubanyi Pal dr. egyet. tanár) közl.

(LEG, fract.

conservative ther., methods & results. (Hun))

(FRACTURES

leg, conservative ther., methods & results. (Hun))

EXCERPTA MEDICA Sec.9 Vol.11/5 Surgery May 1957  
BERENTY Gy

2177. (433) BERENTY Gy., SOMOGYI Sz. and PEER Gy. Unfallchir. Inst. and II. Chir. Klin., Budapest Med. Univ., Budapest. \*Behandlung der Pseudarthrose des medialen Knöchels. Treatment of pseudarthrosis of the internal malleolus ZBL. CHIR. 1956, 81/21 (832-839) Illus. 8

In the authors' case material, pseudarthrosis of the internal malleolus was considerably less frequent than in the reports by other authors. Systematic prophylactic synthesis of the internal malleolus is rejected on these grounds. In exceptional cases, the incarcerated periosteum giving rise to pseudarthrosis is sutured by the present authors, but the low number of such cases and the relatively high number of patients who received conservative treatment and were cured, support their opinion that operation is usually not advisable. The so-called symptom-free pseudarthroses often mentioned in the literature usually correspond to prolonged callus formation, more rarely to pseudarthrosis, which is not operated on and successfully treated by conservative methods. For the treatment of mobile pseudarthrosis, which brings about clinical and roentgenological symptoms, either Zuelzer's clamp, the screw or transplantation of a bone splint is recommended. In particular bone grafting is preferred, viz. with a technical modification in the form of Phemister's bone clasp because the results of this operation are very good.

BERENTHY, Gyorgy, dr.

Nailing of the fractures of humeral neck. Magy. sebeszet 7 no.  
4:262-270 Aug 54.

1. A Budapesti Orvostudományi Egyetem Baleseti Sebészeti Intézetének  
közleménye. (Igazgató: Rubanyi Pal dr. egyetemi tanár)

(HUMERUS, fract.

of neck, intramedullary nailing)

(FRACTURES

humerus neck, intramedullary nailing)

HERCZEG, T.; EERENTY, E.

On re-laparotomy performed for early postoperative complications.  
Acta chir. acad. sci. Hung. 4 no.2:153-170 '63.

1. Chirurgische Abteilung (Direktor: Prof. Dr. B. Molnar)  
des Instituts für Ärztliche Fortbildung, Budapest.

(POSTOPERATIVE COMPLICATIONS) (LAPAROTOMY)  
(GASTRECTOMY) (APPENDECTOMY) (COLOSTOMY)  
(HERNIA) (ILEOSTOMY) (INTESTINAL OBSTRUCTION)  
(CHOLECYSTECTOMY) (UROLOGY) (GYNECOLOGY)  
(SURGERY, OPERATIVE) (STATISTICS)

HERCZEG, Tibor, dr.; BERENTEY, Erno, dr.

Current problems of acute bile duct diseases. Orv.hetil. 105  
no.5:193-199 2F '64.

1. Orvostovabbkepzo Intezet Sebeszeti Tanszek,

\*



HERCZEG, T.; BERENTEY, E.

Experiences with acute abdominal diseases in 10 years of observation  
on patients. Acta chir. Acad. Sci. Hung. 3 no.1:17-38 '62.

1. Chirurgische Abteilung (Direktor: Dr. B. Molnar) des Arztlichen  
Fortbildungsinstitutes Budapest.

(ACUTE ABDOMEN statist)

BIERENTES, Antal

Leipzig, the world's market. Elet tud 15 no.35:1091-1094  
28 Ag '60.

BERENTEI, D.; KALABAI, L.; MED'YESHI, Z.

Treatment of pseudarthrosis of the femoral neck. Ortop., travm.  
i protez. no.1:28-32 '62. (MIRA 15:2)

1. Iz 2-y khirurgicheskoy kliniki Budapeshtskogo meditsinskogo  
universiteta. Adres avtorov: Budapesht, 2-ya khirurg. klinika  
Budapeshtskogo meditsinskogo universiteta.

(FEMUR--DISEASES) (PSEUDARTHROSIS)

LAYNER, A.I.; BERENT, Ya.K.; KOLENKOVA, M.A.; BORISOV, G.B.

Obtaining copper-zirconium addition alloys from potassium fluoro-  
zirconate. TSvet.met. 38 no.3:87-90 Mr '65. (MIRA 18:6)

SOV/128-59-5-17/35

# Metallothermal Method of Producing a Zirconium Master Alloy

originated in Solikam and of especially cheap and pure quality. Its chemical composition is shown in Tab. (3). The results in per cent of the obtained zirconium for various mixtures of magnesium and zinc are listed in Tab.(4), rubric 1) showing the theoretically calculated values for 10% Zr, rubric 2) showing the yield obtained. It is established that by taking more zinc than magnesium the yield of zirconium increases. There are 3 references ( 2 in English language, 1 in Russian language) 3 Figures and 4 Tables.

Card 3/3

SOV/128-59-5-17/35

## Metallothermal Method of Producing a Zirconium Master Alloy

zinc is the formation of zirconium allowed. In order to keep the obtained salts at the molten stage at lower temperatures, fluoride of potassium (KF) is added in order to receive the eutectoidal point of the alloy  $2 \text{ KF} \cdot \text{MgF}_2$  ( $786^\circ$ ) equivalent to 17,5%  $\text{MgF}_2$ . The maximum yield was obtained with 150 grams of anhydrous fluoride of potassium to 100 grams of fluoride of potassium zirconium. Tab. (2) shows the temperature received for the melting of salts by adding various salts, values given in grams per 100 grams of  $\text{K}_2\text{ZrF}_6$ . It could be established that the best reaction temperature is about  $850^\circ\text{C}$ . adding fluoride of potassium (KF). A mixture of magnesium and 20% zinc for producing zirconium has been used. Time of reaction 5-10 minutes. Besides zinc rare-earth elements can be added to the alloy if required. There are 1 photograph, 2 graphs and 3 tables. e.g. 70,6% magnesium, 9,5% zinc, 8,5% zirconium, and 11,4% rare-earth elements. The used carnallite is

Card 2/3

18(3)

SOV/128-59-5-17/35

AUTHOR: Layner, A.I., Doctor of Technical Sciences and  
Kolenkova, M.A. and Berent, Ya.K., Candidates of  
Technical Sciences

TITLE: Metallothermal Method of Producing a Zirconium  
Master Alloy

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 5, pp 30-32 (USSR)

ABSTRACT: Small quantities of zirconium affect the structure  
and the mechanical properties of magnesium castings.  
Fig. (1) shows a comparison between pure magnesium  
and magnesium alloyed with 0.71% zirconium (see also  
Tab. 1). Zirconium can be obtained according to for-  
mula 1. Formation of zirconium takes place already at  
a temperature of 600°C. In order to keep the salts  
(KF.MgF<sub>2</sub>) obtained in the molten stage, a furnace tem-  
perature of 1100°C. is required. This temperature, how-  
ever, is rather unfavorable for magnesium. According to  
formula 2, zinc can be substituted for magnesium. The  
experiments show that only in presence of magnesium

Card 1/3

LAYNER, A.I.; KOLENKOVA, M.A.; BERENT, Ya.K.

Preparing magnesium-base zirconium alloys. Izv.vys.ucheb.zav.;  
tsvet.met. 2 no.1:91-98 '59. (MIRA 12:5)

1. Moskovskiy institut tsvetnykh metallov i zolota. Kafedra metallur-  
gii. Lezhich metallov.  
(Magnesium-zinc-zirconium alloys)



ILLEGIBLE

**Electrothermal production of magnesium-aluminum-magnesium alloys.** Ya. L. Berent. *Legkie Metal.* 6, No. 2, 18-24 (1937). Mixts. of C, MgO, Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> were heated to 1200-1900°. The alloy produced contained Mg 3-5, Al 19-54 and Si 38-49%. Reduction of MgO began at 1100° and proceeded rapidly at 1500°.

H. W. Earlsman

11 A: 1:00000000

A S B S L A METALLURGICAL LITERATURE CLASSIFICATION

| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3RD AND 4TH ORDERS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU CV CW CX CY CZ DA DB DC DD DE DF DG DH DI DJ DK DL DM DN DO DP DQ DR DS DT DU DV DW DX DY DZ EA EB EC ED EE EF EG EH EI EJ EK EL EM EN EO EP EQ ER ES ET EU EV EW EX EY EZ FA FB FC FD FE FF FG FH FI FJ FK FL FM FN FO FP FQ FR FS FT FU FV FW FX FY FZ GA GB GC GD GE GF GG GH GI GJ GK GL GM GN GO GP GQ GR GS GT GU GV GW GX GY GZ HA HB HC HD HE HF HG HH HI HJ HK HL HM HN HO HP HQ HR HS HT HU HV HW HX HY HZ IA IB IC ID IE IF IG IH II IJ IK IL IM IN IO IP IQ IR IS IT IU IV IW IX IY IZ JA JB JC JD JE JF JG JH JI JJ JK JL JM JN JO JP JQ JR JS JT JU JV JW JX JY JZ KA KB KC KD KE KF KG KH KI KJ KL KM KN KO KP KQ KR KS KT KU KV KW KX KY KZ LA LB LC LD LE LF LG LH LI LJ LK LL LM LN LO LP LQ LR LS LT LU LV LW LX LY LZ MA MB MC MD ME MF MG MH MI MJ MK ML MN MO MP MQ MR MS MT MU MV MW MX MY MZ NA NB NC ND NE NF NG NH NI NJ NK NL NM NO NP NQ NR NS NT NU NV NW NX NY NZ OA OB OC OD OE OF OG OH OI OJ OK OL OM ON OO OP OQ OR OS OT OU OV OW OX OY OZ PA PB PC PD PE PF PG PH PI PJ PK PL PM PN PO PP PQ PR PS PT PU PV PW PX PY PZ QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QQ QR QS QT QU QV QW QX QY QZ RA RB RC RD RE RF RG RH RI RJ RK RL RM RN RO RP RQ RR RS RT RU RV RW RX RY RZ SA SB SC SD SE SF SG SH SI SJ SK SL SM SN SO SP SQ SR SS ST SU SV SW SX SY SZ TA TB TC TD TE TF TG TH TI TJ TK TL TM TN TO TP TQ TR TS TT TU TV TW TX TY TZ UA UB UC UD UE UF UG UH UI UJ UK UL UM UN UO UQ UR US UT UU UV UW UX UY UZ VA VB VC VD VE VF VG VH VI VJ VK VL VM VN VO VQ VR VS VT VU VW VX VY VZ WA WB WC WD WE WF WG WH WI WJ WK WL WM WN WO WP WQ WR WS WT WU WV WW WX WY WZ XA XB XC XD XE XF XG XH XI XJ XK XL XM XN XO XP XQ XR XS XT XU XV XW XX XY XZ YA YB YC YD YE YF YG YH YI YJ YK YL YM YN YO YQ YR YS YT YU YV YW YX YY YZ ZA ZB ZC ZD ZE ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZQ ZR ZS ZT ZU ZV ZW ZX ZY ZZ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>Electrolytic production of magnesium-aluminum alloys from a fused-cryolite bath. A. M. Romanovskii and Ya. K. Berezin. <i>Lekkie Metal.</i> 6, No. 6, 27-40 (1957). Although MgO is sol. in molten cryolite up to 15%, its electrolysis is impractical, as principally Al is deposited, decomposing the electrolyte. H. W. Rathmann</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>ASH 514 METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

BERENT, V.Ya., inzh.

Structural changes on the friction surface of contact wires  
and plates on pantographs. Trudy TSNII MPS no.277:144-158 '64.  
(MIRA 17:6)

BERENT, Stanislaw, mgr

Clean bills of lading against letters of indemnity. Tech  
gosp morska 14 no. 4:102-104 Ap '64.

1. District Arbitration Commission, Gdansk.

ACCESSION NR: AT4040371

ASSOCIATION: none

SUBMITTED: 12Oct63

DATE ACQ: 12Jun64

ENCL: 00

SUB CODE: ls

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AT4040371

S/0000/63/000/000/0185/0194

AUTHOR: Berent, N. Ye.

TITLE: Application of bentonite clays of Uzbekistan in medicine

SOURCE: Soveshchaniye po bentonitovy'm glinam Uzbekistana, 1961. Bentonity\* (Uzbekistan); doklady\* soveshchaniya. Tashkent, Izd-vo AN UzSSR, 1963, 185-194

TOPIC TAGS: bentonite, medical application, dermatology, carrier, adsorbent

ABSTRACT: The use of animal fats in dermatological ointments and other preparations has become obsolete because the free fatty acids in animal fat decompose the ingredients of the preparation often damaging the skin and the mucous membrane of the eyes. However, the adsorbent and dispersion properties of bentonites make them an excellent ingredient in granicidine preparations for epidermymycosis, dermatophytide and other skin diseases. The preparation can be made in the form of a powder, balm, liquid, soap or emulsion. The possibility of using bentonites in preparing pills and tablets as substitute for sodium bicarbonate and sugar has also been considered.

Card 1/2

BERENT, N. Ye.

New medicinal forms of gramicidin C. Antibiotiki 6 no.2:164-167  
F '61. (MIRA 14:5)

1. Mediko-sanitarnaya chast' zavoda sel'skokhozyaystvennykh mashin  
imeni K.Ye. Voroshilova, Tashkent.  
(ANTIBIOTICS)



BERENT, N.Ye.

Prevention and treatment of skin diseases among workers in agricultural machinery plants with Soviet gramicidin preparations. Med. zhur. Uzb. no.8:34-36 Ag '60. (MIRA 13:9)  
(TASHKENT--AGRICULTURAL MACHINERY INDUSTRY--HYGIENIC ASPECTS)  
(SKIN--DISEASES) (GRAMICIDIN)

*RECENT, N. Ye.*

BERENT, N.Ye.; GIL'MAN, Kh.Z.; TISLENKO, G.I. (Tashkent)

Effectiveness of using Az-Kamar bentonite with Soviet gramicidin  
in treating epidermophytosis and pityriasis versicolor. Vest.  
serm. 1 ven. 31 no.3:49 My-Je '57. (MIRA 10:11)  
(SKIN--DISEASES) (BENTONITE--THERAPEUTIC USE)  
(GRAMICIDIN)

BERENT, I. Ye., Cand Med Sci -- "Clinical, experimental ob-  
servations of the <sup>preventive treatment</sup> medicinal-prophylactic action of the Soviet  
gramicidin in ointment bases in the presence of pyoderma."  
Ryazan', 1961. (Min of Health RSFSR. Ryazan Med Inst im Acad  
I. P. Pavlov) (KL, 8-61, 259)

BERENT, I.Ye.; GIL'MAN, K.Z.

Experience in the use of the new domestic antibiotic albomycin  
in dermato-venereology. Sov. med. 18 no.7:34-35 J1 '54. (MLRA 7:8)

1. Iz mediko-sanitarnoy chasti zavoda Tashsel'mash imeni K.Ye.  
Voroshilova.

(VENEREAL DISEASES, therapy

\*antibiotics, albomycin)

(SKIN, diseases

\*ther., antibiotics, albomycin)

(ANTIBIOTICS, therapeutic use

\*albomycin in skin and venereal dis.)

CONSTANTINESCU, D.; BERENSTEIN, I., coresp.

On some industrial construction sites. Constr Buc 17 no.801:  
1,4 15 My '65.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800038-6

PRUNDARU, M.; BUCUR, Scellan, coresp.; BERENSTEIN, I., coresp.; BUCUR, STU.  
Ille, ing.

The ceramists at the beginning of the work campaign. fense  
Buc 17 no.797:3 17 Ap '65.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800038-6

BERENSTEIN, I., corosp.

The innovation, an inexhaustible reserve. Coratr. No. 12 no. 366  
3 24 Ap '65.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800038-6

BERENSTEIN, I.; ILLI, Ion, SUCUR, Stefan

Rumanian newspaper correspondence on the January 1968.  
Cenatr Buc 17 no. 783:1 13 P 164.



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800038-6

BERENSTEIN, L., correspondent; DRU, Eugenia, economist

First innovations of the new year. Constr Buc 1?  
no.784:1 16 Ja '65.

BERENSTEIN, I., correspondent

A rich plan. Constr Buc 17 no.783:1 9 Ja '65.

VARTAN, Iacob, correspondent; BERENSTEIN, I., correspondent;  
STANCIU, B.

Training and improving the cadres. Constr Buc 16  
no. 752: 4 6 June '64.

1. The Galati Branch of the Voluntary Editorial Office  
of the Constructorul (for Stanciu).

FLOROV, Vasilii Arkad'yevich; YULKEVICH, Rozaliya Veniaminovna;  
BERENSON, Yu.E., red.; MARAKASOVA, P.P., tekhn.red.

[Metals of the future] Metally budushchego. Moskva, Izd-vo  
"Sovetskuaia Rossiia," 1960. 182 p. (MIRA 14:4)  
(Rare earth metals)

TITOV, Vladimir Semenovich; BERENSON, Yu.E., red.; MARAKASOVA, L.P.,  
tekhn.red.

[Ion exchangers] Ionity. Moskva, Izd-vo "Sovetskaya Rossiya,"  
1960. 51 p. (MIRA 13:5)  
(Ion exchange)

RUSIN, Nikolay Petrovich; BERENSON, Yu.E., red.; YUSFINA, N.L., tekhn.red.

[Continent beyond the clouds] Kontinent za oblakami. Moskva,  
Izd-vo "Sovetskaya Rossiya," 1959. 173 p. (MIRA 13:4)  
(Antarctic regions)

LANDAU, Lev Davydovich, akademik; RUMER, Yuriy Borisovich, prof.:  
BERENSON, Yu.E., red.; YUSFINA, N.L., tekhn.red.

[What is the theory of relativity?] Chto takoe teoriia  
otnositel'nosti. Moskva, Izd-vo "Sovetskaya Rossiya,"  
1959. 61 p. (MIRA 13:2)  
(Relativity (Physics))

DAVYDOV, Mitrofan Mikhaylovich; TSUNTS, Mikhail Zinov'yevich; BERENSON,  
Yu.E., red.; ROZEN, E.A., tekhn.red.

[From the Volkhov to the Amur] Ot Volkhova do Amura. Moskva,  
Izd-vo "Sovetskaya Rossiya," 1958. 325 p. (MIRA 12:2)  
(Hydroelectric power stations)



PLONSKIY, Aleksandr Filippovich; SIFOROV, V.I., nauchnyy red.; BERENSON,  
Yu.E., red.; YUSFINA, N.L., tekhn.red.

[Radio electronics, or the story of wonderful inventions: how man tamed the waves; the new Aladdin and his lamp; how they listened in on the conversation of the stars; hundreds of professions for the "thinking" machine; and many other subjects] Radicelektronika ili rasskaz ob udivitel'nykh otkrytiakh: o tom, kak chelovek priruchil volnu, o novom Aladine i ego lampe, o tom, kak podslushali razgovor zvezd, o sta professiakh "mysliashchei" mashiny i o mnogom drugom. Moskva, Sovetskaya Rossiya, 1958. 222 p. (MIRA 12:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Siforov).  
(Electronics)

KOZHIVNIKOVA, Tamara Bogdanovna; BRENNSON, Yu.M., red.; YUSFINA, N.L.,  
tekh. red.

[Wings of the motherland] Kryl'ia rodiny. Moskva, Izd-vo  
"Sovetskaya Rossiya," 1958. 157 p. (MIRA 11:10)  
(Aeronautics)

BARABASHOV, Nikolay Pavlovich, akademik; BERENSON, Yu.E., red.; LUKINA,  
L.Ye., tekhn.red.

[The moon] Luna. Moskva, Izd-vo "Sovetskaia Rossiia," 1958.  
66 p. (MIRA 12:4)

1. Akademiya nauk USSR (for Barabashov).  
(Moon)

The Way to the Stars

418

world opinion concerning Soviet scientific achievements after this event are commented on. The launching of Sputnik II is described and a comparison of the two satellites is made. A description is given of the celebration in Moscow on November 7, 1957 of the 40th Anniversary of the Revolution. The speeches delivered are mentioned and the booklet closes with an expression of confidence in further rapid scientific progress.

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BERENSON, Yu. E.

PHASE I BOOK EXPLOITATION

438

Ryabchikov, Yevgeniy Ivanovich

Tak idut k zvezdam (~~The Way to the Stars~~) Moscow, Izd-vo "Sovetskaya Rossiya", 1957. 85 p. 50,000 copies printed.

Science Ed.: Fedorov, Ye. K., Corresponding Member of the USSR Academy of Sciences. Ed.: Berenson, Yu. E.; Tech. Ed.: Fiveg, G. M.

PURPOSE: The booklet is a popular account of the development of rocketry, satellites, etc., addressed to a large audience.

COVERAGE: The booklet contains a brief account of Tsiolkovskiy's life and discusses this "prophet's message" on astronomy and future space travel. The early history of rocketry up to 1903 is given. The development of Russian aviation is described and a great number of aircraft designers and pilots are mentioned. Modern rockets used for geophysical measurements and developed more or less on the basis of the German V-2 are described. A section deals with ~~dog-carrying~~ rockets and tests made at various altitudes. Soviet progress before the launching of Sputnik I and the sudden change in

Card 1/3

MEKTYUMYAN, A.K., kand.tekhn.nauk; BEEENSON, S.S., inzh.

Use and modernization of molds for making large panels for apartment houses. Stroi. i dor. mashinostr. 5 no.12:19-23 D '60.

(MIRA 13:11)

(Precast concrete construction)

(Concrete slabs)

1

Coagulation of the disperse phase... S/065/62/000/003/004/004  
E194/E184  
necessary to oxidise the oil to lacquer by heating it to a thin  
layer.  
There are 2 figures and 4 tables.

Card 4/4

Coagulation of the disperse phase... S/065/62/000/003/004/004  
E194/E184

lose their electrical charge. On adding lamp black to fresh oil it was found that coagulation did not occur at carbon concentrations below 0.5% but at higher concentrations it increased rapidly. Additives were found to retard or prevent coagulation. The rate of lacquer formation in engines, which can be accounted for by oxidation, is often associated with coagulation. In particular coagulation seems to predominate in cold lacquering. Lacquer films removed from engine parts at moderate temperature consist mainly of carbenes and carboides which could hardly be formed by direct oxidation of the oil on the parts concerned. The asphaltene content of the lacquer is low. Thus, the lacquer film is formed from oil insolubles rather than from oil soluble constituents. Used engine oil consists of a complicated disperse system of which some of the components are in the molecular state, others in the form of larger colloidal particles and still others in the form of solid insolubles surrounded by an adsorbed layer of surface-active substances. These particles tend to coagulate at high temperatures. The time required for them to coagulate is much shorter than that

Card 3/4



Coagulation of the disperse phase... S/065/62/000/003/004/004  
E194/E184

particles of coagulated carbon are formed in the oil. The process can be assessed by applying a layer of oil of known thickness to a hot metal surface and determining the time required for the coagulation of particles visible at a given magnification. A procedure was developed in which a chromium plated metal cup 20 mm in diameter with a rim 1 mm high was heated on an electric heater to a set temperature and a measured quantity of oil was introduced with a pipette. The cup was examined with a binocular microscope of X 42 magnification. The time required for clearly visible particles to form was measured. The test was repeated three times and the average result termed the coagulation induction period. Raising the temperature greatly reduces the coagulation induction period, thus it is 20 seconds at a temperature of 150 °C and about 3 seconds at 250 °C. The nature of the metal used seems to have little influence on the coagulation induction period, but coagulation is much slower or even absent in a glass vessel. The effect of a conducting surface in accelerating coagulation indicates that the process is one in which carbon particles

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Card 2/ 4

34618

S/065/62/000/003/004/004  
E194/E184

119000

AUTHORS: Papok, K.K., and Berenson, S.P.

TITLE: Coagulation of the disperse phase as a cause of  
lacquer formation in engines

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.3, 1962,  
50-56)

TEXT: Engine lacquering is a serious problem, the causes of which are not fully understood. Some authors associate it with the lubricant and others with the fuel, but little attention has been paid to coagulation of the disperse phase in thin layers of hot engine parts. Used engine oils are highly contaminated with dispersed fine particles and their aggregation has been studied in a number of works which have, however, mainly been concerned with bulk effects and not with thin layers. The authors have found that in thin layers of oil the aggregating stability of fine particles is very low, and that the evolution of carbon particles from the oil can be a cause of lacquering. If a drop of used engine oil or oil containing carbon black is heated,

Card 1/4

BERENSON, S.P.; Primal uchastiye VLASOV, Yu.A.

Investigating the oxidability of oils in thin layers by the photo-  
electric method. Khim. i tekhn. topl. i masel 6 no.11:64-66 N '61.  
(MIRA 14:12)

(Lubrication and lubricants--Additives)  
(Photoelectricity)